

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Tri-Chem Industries - Removal Polrep
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VI

Subject: POLREP #2
Final
Tri-Chem Industries
A6RA
Cresson, TX
Latitude: 32.5511480 Longitude: -97.6592910

To: Anthony Buck, TCEQ
Reggie Cheatham, EPA HQ
Ronnie Crossland, EPA R6

From: Adam Adams, OSC
Date: 8/2/2018
Reporting Period: 3/18/2018-4/20/2018

1. Introduction

1.1 Background

Site Number:	A6RA	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	PRP	Incident Category:	
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	3/15/2018	Start Date:	3/15/2018
Demob Date:	4/20/2018	Completion Date:	7/31/2018
CERCLIS ID:	TXN010606647	RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Emergency Response

1.1.2 Site Description

A fire with multiple explosions occurred in the morning hours of 15 March 2018 at Tri-Chem Industries site.

Tri-Chem is described as a manufacturer and distributor of specialty chemicals for food and industrial applications with a product line of silicone and non-silicone antifoams/defoamers, silicone emulsions, phosphoric acid, phosphate derivatives, and custom blending solutions.

Materials onsite prior to the incident included: phosphoric acid, citric acid, silicone antifoam and emulsions, phosphates (sodium tripoly phosphate, sodium hexametaphosphate, tetrasodium pyrophosphate, tetrapotassium pyrophosphate), asphalt additives, glycol ether DPM, copper sulfate, sodium hydroxide, sodium hydrosulfide, and other chemicals.

TCEQ provided a Tier II inventory to EPA via email on 15 March 2018. PRP also provided a list of chemicals believed to be onsite prior to the incident.

1.1.2.1 Location

Incident location is 2600 North Cresson Highway (Highway 171), Cresson, Hood County, Texas.

Latitude: 32°33'08"North
Longitude: -97°39'32" West

Offsite impact involved firefighting water/ precipitation runoff (low pH) to an adjacent property to the east (lumber yard), the railroad right-of-way (north and south sides of the rail), and to an adjacent property (ranch land) to the south of railroad.

1.1.2.2 Description of Threat

Due to the unknown chemicals involved and injuries to a fire fighter, the fire departments pulled back from the area and let the fire burn. Highway 171 (adjacent to the facility) was closed in both directions from Highway 377 to Monroe Highway. Media coverage was onsite; DPS set up a PIO location at the fire station. Runoff of chemicals was reported flowing towards an adjacent railroad track to the south.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Upon arrival and initial assessment with local fire department officials on 15 March 2018, the EPA Team conducted air monitoring around the facility. Preliminary results detected hydrogen cyanide and ammonia

immediately downwind of the facility (intersection of facility entrance and Highway 171 - winds were out of the south). Chemicals stored at the facility combined with firefighting water were observed migrating offsite in a southerly direction. The EPA team collected pH measurements of the liquid ranging between 1 and 2. These low pH conditions were observed in the southeast area of the facility property, an adjacent property, and railroad right-of-way (Ft. Worth & Western Railroad).

The EPA ASPECT aircraft was deployed for aerial air monitoring activities. ASPECT air monitoring measured 1-butene, a common byproduct of the combustion of organics, at 1.2 ppm over the facility. Approximately 50 meters downwind of the facility, ASPECT measured 1-butene, 2-butene, alcohol, isobutylene, and acetone at 1.7 ppm, 2.8 ppm, 0.5 ppm, 1.9 ppm, and 0.4 ppm, respectively. EPA OSC Adams released the ASPECT aircraft at 1530 hours on 15 March 2018.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

During the response, the EPA Team conducted air monitoring of contaminants of concern for public health and the environment, and documentation of PRP response activities. The EPA Team worked with TCEQ, Hood County Fire Marshal's Office, and OSHA to provide oversight to the PRP. The PRP (via contractors) conducted response operations including rain contingency, runoff removal, recovery and removal of remaining chemicals and residues, and pad debris recovery in coordination with OSHA, TCEQ, and Hood County Fire Marshals officials.

2.1.2 Response Actions to Date

On 15 March 2018, firefighting efforts were initiated, and two victims (employees) were transported to area hospitals due to injuries sustained by the fire and explosion. Firefighting efforts were discontinued, and the fire was allowed to burn itself out. Soil berms were constructed along the spill pathway to mitigate further downgradient migration of the low-pH liquids, fire contact liquids, or remaining unconsumed chemicals.

The EPA Team met with and joined Unified Command with the responding Incident Commander (Cresson Fire Chief), OSHA, County Fire Marshals, TCEQ, and PRP's contractor (representing the PRP) for a situational update.

A preliminary assessment by EPA found the faint plume flowing north across Highway 171 to have ammonia (NH₃) at 1 ppm (PEL 50 ppm), and hydrogen cyanide (HCN) at 3 ppm (PEL 10 ppm). Liquids had drained from the facility to the ditch along the east of the property and to the south, at which point it flowed east along the railroad tracks and then under the tracks through a culvert. Run-off liquids measured pH 2 on the north side of the railroad tracks. A soil berm was initially constructed the day of the incident approximately 200 feet south of the facility. The next day soil berms were constructed north of the adjacent railroad tracks to mitigate further flow of liquid runoff migrating further off site. Vacuum trucks were staged on site and began recovering liquids downgradient of the warehouse along drainage pathways.

Air monitoring along Highway 171 on 15 March in the faint plume measured HCN and NH₃ at 2 ppm and 1 ppm, respectively. The Fire Chief opened Highway 171 at approximately 1600 hours the same day.

From 15 March to 20 April 2018, the EPA Team conducted periodic on-site air monitoring of the contaminants of concern (COC) {Cl₂, HCN, NH₃, CO, H₂S, VOCs, LEL, and O₂} for protection of public health and the environment. In response to the ongoing fire and sustained chemical release, the EPA Team conducted air monitoring downwind of the fire and along the perimeter of the facility. Air monitoring results showed no COCs above OSHA PELs, except two instances involving chlorine. Chlorine (PEL 1 ppm; IDLH 10 ppm) was first detected at 1.4 ppm in the eastern area of the facility on 17 March 2018. Operations continued with monitoring being conducted as the measurement was not sustained. Chlorine was detected at 10.8 ppm at the facility's former loading dock (inclined concrete pad area) on 25 March 2018 at which point the EPA Team and PRP contractor immediately relocated 200-300 feet cross-wind, to the north. Subsequent daily maximum detections of chlorine ranged from to 0.1 ppm to 7.8 ppm through EPA's demobilization on 20 April 2018.

EPA Team continued measuring pH of firefighting water runoff and on 19 March 2018 measured pH of 5-6 of off-site liquids north and south of a rail line adjacent to the southern boundary of the facility. PRP contractors continued removal of liquids from the runoff pathway off-site towards the southeast, by the railroad tracks. These recovered liquids were transferred from vacuum trucks to on-site frac-tanks.

On 22 March 2018 PRP contractors excavated soil previously potentially impacted by the low pH liquids on the north and south sides of the railroad tracks along the drainage path. Confirmation soil samples were collected on 24 March 2018 by the PRP's contractors (TAS and KJE) and submitted for laboratory analysis to include - VOCs, SVOCs, metals (RCRA 8 metals plus site-specific metals), pH, and sulfur compounds. These parameters were agreed to by EPA and TCEQ officials.

Segregation of scrap metal building debris continued throughout the response and remediation operations. Scrap metal was staged onsite while the PRP and PRP contractors identified a suitable recycling facility.

Citric acid and copper sulfate materials remaining on the warehouse concrete pad was determined by the PRP to be recoverable and recycled for future use. Consequently these materials were organized in salvageable and non-salvageable groupings.

On 20 April 2018, EPA transferred regulatory monitoring from EPA to TCEQ.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

At this time, the PRP is Tri-Chem Industries.

2.1.4 Progress Metrics

TCEQ provided a Tier II inventory to EPA via email on 15 March 2018. The PRP provided an inventory of chemicals that were believed to be onsite prior to the incident. PRP had previously stated 250,000 lbs of chemicals were in the building before the incident.

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

No further field operations are planned for EPA. The PRP is working on their final report, and will provide it to EPA and TCEQ upon completion.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

2.5 Other Command Staff

Upon arrival, EPA entered Unified Command with the OSHA, TCEQ, the Fire Marshal's office, Fire Chief, and PRP's contractor (representing the PRP).

3. Participating Entities

3.1 Unified Command

Upon arrival, EPA entered Unified Command with the OSHA, TCEQ, the Fire Marshal's office, Fire Chief, and PRP's contractor (representing the PRP).

3.2 Cooperating Agencies

In addition to EPA, the following fire departments were on scene on 15 March: Cresson FD, Tolar Volunteer FD, Spring Creek FD, North Hood County Volunteer FD, Pecan Plantation FD, Ft. Worth FD, De Cordova FD, Granbury FD, Texas EMS, Baker Dover FD, Parker County FD.

Others onsite include – Hood County Emergency Management, Ft. Worth Red Helmets, Hood County Sheriff's office, TCEQ, United Co-Op (electric), Hood County Fire Marshal, State Fire Marshal, ATF, Texas DPS, OSHA, and TxDOT.

Due to the large number of agencies present, this list may not be all inclusive of responding agencies.

4. Personnel On Site

Site access was limited to response personnel, to include, but not limited to, EPA, OSHA, Fire Marshal's Office, TCEQ, and the PRP, and respective contracted personnel.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

6.1 Internet location of additional information/report

Additional information can be obtained at www.response.epa.gov/TriChemIndustriesFire.

6.2 Reporting Schedule

No further POLREP's will be submitted for this incident. This is the Final EPA POLREP.

7. Situational Reference Materials

No information available at this time.